

Vincent Onyango

Software Engineer & Systems Architect

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Professional Summary

Creative Software Engineer and Systems Architect with 8 years of experience leveraging a wide spectrum of technologies to architect, build, and deploy highly scalable distributed systems. Expertise spans diverse ecosystems (Python, JavaScript/TypeScript, .NET, Rust, F#), database technologies (SQL/NoSQL), cloud platforms (AWS, Azure, Vercel), containerization, and orchestration (Kubernetes). Proven engineering leader committed to establishing technical standards, mentoring cross-functional teams, and driving Agile/TDD practices. Passionate about applying functional programming, the actor model, event sourcing, distributed GraphQL, and CQRS to solve complex business challenges and unlock organizational scale.

Selected Architectural Projects

Lead Architect & Creator

Complitr (Open Source Home Media Server) | December 2024 – Present

- Architected and developed Complitr, a highly resilient distributed home media server, utilizing F# CRDTs, the Actor Model, and P2P networking (iroh/p2panda) to achieve robust eventual consistency across distributed nodes.
- Designed and implemented a Kubernetes Operator from scratch using Rust and the kube crate, focusing on declarative configuration for complex system lifecycle management.
- Authored Custom Resource Definitions (CRDs) to automate complex stateful operations, including distributed database migrations and zero-downtime rolling upgrades.

Experience

Web Products Lead

ApolloBrokers (New York City) | February 2022 – Present

- Direct a cross-functional engineering team in developing and scaling core web products using Django, React, Next.js, and TypeScript on a Vercel/AWS infrastructure.
- Partner directly with the CTO and product design teams to define technical roadmaps, prioritize Agile sprints via Linear, and align engineering outputs with core business objectives.
- Spearheaded SEO and web performance optimization initiatives (Lighthouse, Workbox), successfully driving a 15% increase in organic application traffic.
- Architect and scale secure backend solutions utilizing the Django REST framework, PostgreSQL, Celery, and Redis, ensuring high availability and low latency.
- Establish and enforce engineering standards across the organization, advocating for strict TDD, rigorous PR reviews, pair programming, and automated CI/CD pipelines.

- Reduced development lead times and infrastructure costs by 20% by modernizing deployment workflows and integrating Next.js with automated Vercel deployments.
- Mentor junior and mid-level developers, resolving complex architectural bottlenecks and fostering a culture of continuous learning and high code quality.

Senior Frontend Developer

Civilized Software (Los Angeles) | April 2021 – February 2022

- Spearheaded front-end architecture and development lifecycles for high-traffic web applications, overseeing project phases from initial technical specification to production deployment.
- Architected a custom Node.js CLI tool to automate UI component scaffolding, standardizing the workflow and accelerating development cycles across the entire engineering department.
- Designed highly extensible API schemas in collaboration with backend teams, streamlining the integration of new features and accelerating overall delivery metrics.
- Authored comprehensive technical documentation and standardized tooling, significantly reducing the onboarding time for new engineering hires.
- Executed feature implementations strictly to specification while optimizing client-side performance and security, ensuring a seamless and reliable user experience.

Fullstack Software Developer

Skwire Limited (London) | February 2020 – March 2021

- Partnered with the data science team to architect and develop an internal, data-heavy web application utilizing Python/Django and JavaScript/React.
- Designed a robust, multi-target distribution structure for .NET microservices utilizing Nix for declarative dependency management and cross-compilation across Linux, Windows, and Darwin architectures.
- Redesigned legacy front-end architectures to enhance extensibility, cutting development time for new features by 30% and improving static code quality metrics by up to 60%.
- Applied Domain-Driven Design (DDD) and event-driven paradigms using .NET and C# to build scalable applications, boosting system performance by 25% and scalability by 35%.

Software Engineer

Andela (Nairobi) | November 2018 – November 2019

- Leveraged Python/Flask, Django, and GraphQL to build robust backend APIs, while seamlessly context-switching to frontend development using JavaScript/React/Redux.
- **Converge (Room Management System):** Engineered GraphQL mutations/queries and optimized backend API performance by 30%, resolving critical Google Calendar synchronization bottlenecks.
- **Hall of Fame (Social Engagement Site):** Debugged and refactored legacy codebases to improve quality. Implemented CI tooling to enforce consistent formatting, ultimately increasing user retention by 25%.
- **AuthorsHaven (Blogging App):** Managed deployments and integrated CI/CD pipelines for secure delivery. Led sprint execution to achieve a 10% increase in sprint completion rates.

Software Developer

Freelance (Nairobi) | November 2017 – November 2019

- **Quexl Web App:** Improved user experience and engagement by creating and maintaining a robust back-end and database architecture utilizing strict TDD approaches.
- **Mobilities Web App:** Handled full-stack development using React/TypeScript and Python/Django, expanding platform capabilities by integrating multiple third-party APIs.

IT Intern

Quest Holdings Limited (Nairobi) | June 2016 – October 2016

- Maintained operating systems and supported daily IT operations across the company infrastructure.

Education

Bachelor of Science in Computer Science

Multimedia University of Kenya, Nairobi | September 2014 – November 2018

Technical Skills

- **Languages:** Python, JavaScript, TypeScript, F#, Rust, C#.NET, HTML/CSS, Bash, Haskell, Perl
- **Frontend:** React.js, Next.js, MaterialUI, Tailwind CSS, MobX
- **Backend:** Python/Django, Python/Flask, GraphQL, Apollo, SQLAlchemy, RESTful APIs
- **Databases:** PostgreSQL, MongoDB, Redis
- **DevOps & Infrastructure:** Docker, Kubernetes, Nix, Vercel, AWS, Azure, Heroku, Git, CI/CD
- **Architecture:** Distributed Systems, CRDTs, Actor Model, P2P (iroh/p2panda), Event Sourcing, CQRS, DDD